Application No.

Applicant(s)

Examiner 254

Art Unit

✓ Rejected= Allowed

(Through numeral)
Cancelled
+ Restricted

Non-Elected

I Interference

A Appeal
O Objected

|          |          |                       | L        | _         | L       |         |   |          | _ | _  | ╛          |          |         | L      |          |           |
|----------|----------|-----------------------|----------|-----------|---------|---------|---|----------|---|----|------------|----------|---------|--------|----------|-----------|
|          |          |                       | _        |           |         |         | _ |          |   | _  | _          |          |         |        |          |           |
|          | Claim    |                       |          |           | _       | -1      | _ | _        |   | Da | <u>ite</u> | _        | _       | _      |          |           |
|          | -        | 區                     |          |           | l       |         |   |          |   | l  | 1          |          | l       |        |          |           |
|          | Final    | Original              |          |           |         | 1       |   |          |   |    | ł          |          | l       |        | - 1      |           |
|          | -        | Ō                     | 1        |           |         | 1       |   | 1        |   |    | 1          |          |         |        |          |           |
| İ        |          |                       | ┰        |           | ┝       | +       | _ | ╁        |   | ┢  | +          | _        | ┝       | ╅      | +        | _         |
| ı        |          | 2                     | 1        | _         | H       | 7       |   | †        | _ | t  | 7          |          | H       | +      | +        | _         |
| Ì        |          | 1<br>2<br>3<br>4<br>5 | Ī        |           | Г       | 1       |   | Ť        | - | Г  | 1          |          | Г       | $\top$ | 7        |           |
|          |          | 4                     | Ι        |           |         | T       |   | Ι        |   |    |            |          |         | T      | 7        |           |
|          |          | 5                     | ┸        |           |         | ⊥       |   | L        |   |    | $\perp$    |          |         |        | I        |           |
|          |          | 6                     | 1        | _         |         | 4       |   | Ļ        | _ | L  | ⊥          |          |         |        |          |           |
| -        |          | 7                     | ╀        | _         | _       | 4       | _ | 1        | 4 | _  | 1          | 4        | _       | 1      | 4.       |           |
| -        |          | 8<br>9                | ╀        | 4         | _       | +       | _ | ╀        | 4 | _  | +          | 4        | _       | 4      | 4        | _         |
| -        |          | 10                    | ╀        | ┥         | _       | +       | _ | ╀        | 4 | _  | ╀          | -        | _       | ╀      | 4        | _         |
| -        |          | N                     | ╁        | $\dashv$  | _       | +       | _ | ╀        | ┥ | _  | +          | 4        | _       | ╀      | +        | _         |
| <b> </b> |          | 12                    | ╁        | +         |         | +       | _ | ╁        | ┪ | _  | ╁          | ┪        | -       | +      | ┿        | $\dashv$  |
|          |          | 13                    | 1        | 7         | _       | ╁       |   | H        | + | _  | ╁          | +        | _       | ╁      | $^{+}$   | $\dashv$  |
|          |          | 14                    | Γ        | 7         |         | †       |   | T        | 7 |    | 十          | 1        | _       | 1      | +        | ┪         |
|          |          | 15<br>16              |          |           |         |         |   |          | 7 | _  | 1          | 1        |         | T      | †        | $\exists$ |
|          |          | 16                    | L        | 1         |         | L       |   |          | I |    | Ι          | _        |         |        |          |           |
| L        |          | 17                    | L        | 4         |         | $\perp$ | _ | L        | 1 |    | L          | 1        |         |        | l        | $\Box$    |
| -        |          | 18<br>19              | L        | 4         | _       | ↓       | _ | L        | 4 | _  | Ļ          | 1        | _       | L      | 1        | _         |
| -        |          | 19                    | -        | +         |         | ╀       | _ | <u> </u> | 4 | _  | ╀-         | 4        |         | ↓      | 1        | _         |
| -        |          | 20                    | <u> </u> | +         | _       | ╀       | _ | -        | 4 |    | ╀          | +        |         | -      | +        | 4         |
| -        |          | 21<br>22              | ⊢        | +         |         | ╁       | _ | ⊢        | + | _  | ╀          | +        | _       | ╀      | ╀        | $\dashv$  |
| <u> </u> |          | 23                    | H        | $\dagger$ |         | ╁╴      | - | H        | + | _  | ╁          | Ť        | -       | ⊢      | ╁        | -         |
| 上        |          | 24                    |          | t         | _       | H       | i | _        | † |    | H          | +        | -       | ┝      | ╁        | $\dashv$  |
| ┌        |          | 25                    |          | †         | _       | T       | 7 | _        | t | _  | r          | †        | _       | ✝      | +        | ┨         |
|          |          | 26<br>27              |          | Ī         |         |         |   |          | Ť | _  | T          | Ť        |         | 1      | Ť        | ┪         |
|          |          | 27                    |          | I         |         |         |   |          | Ι |    |            | Ι        |         |        |          | 1         |
| L        |          | 28                    |          | 1         | _       | L       | 4 |          | L | _  | L          | Ţ        |         |        | L        | ]         |
| -        |          | 29                    |          | ╀         | _       | L       | 4 |          | ļ | _  | L          | 1        |         | L      | L        | ╝         |
| -        | $\dashv$ | 30                    | _        | ╀         | _       | ┝       | 4 |          | ╀ | _  | -          | ļ        |         | _      | ┞        | 4         |
| $\vdash$ |          | 31<br>32              | _        | ╀         | _       | -       | + |          | ╀ | _  | ┝          | ╀        | _       | -      | ╀        | 4         |
| ┢        | - +      | 33                    |          | ╁         | _       | -       | ┨ |          | ╀ |    |            | ╀        | _       | -      | ╀        | $\dashv$  |
| 上        | - 1      | 34                    | _        | t         | ٦       | ┢       | + |          | t | _  | -          | ╁        |         | -      | ╁        | ┨         |
| $\vdash$ |          | 35                    | _        | t         | ┪       |         | t | _        | t | _  | _          | t        | _       | -      | t        | 7         |
|          |          | 36                    | _        | Ī         | _       |         | j | _        | T | ٦  | $\vdash$   | T        | 7       | _      | T        | $\dashv$  |
|          | $\Box$   | 37                    |          |           |         |         | I |          |   |    |            | Ι        |         |        | Γ        | 7         |
| $\perp$  |          | 38                    |          | L         | ┙       |         | 1 | _        | L |    |            | L        |         |        |          |           |
| $\vdash$ | _        | 39                    |          | L         | 4       | _       | 1 |          | L | _  |            | L        | _       |        |          | ]         |
| $\vdash$ | -+       | 40                    | _        | L         | 4       |         | 4 |          | L | 4  | _          | L        | 4       |        | L        | 4         |
| -        |          | 41<br>42              |          | H         | 4       | _       | + |          | ┞ | 4  | _          | Ļ        | 4       | _      | L        | 4         |
| $\vdash$ | $\dashv$ | 43                    | -        | H         | +       |         | + | _        | ┝ | -  |            | $\vdash$ | +       | _      | $\vdash$ | $\dashv$  |
|          | $\dashv$ | 44                    |          | ۲         | +       | _       | t | _        | ┝ | ┪  | _          | ╁        | +       | -      | ⊢        | $\dashv$  |
| $\vdash$ | 十        | 45                    |          | -         | +       | -       | t |          | H | ┪  |            | H        | +       | _      | -        | ┨         |
|          | П        | 46                    |          | Н         | 7       | _       | t | ٦        | Т | ┪  |            | H        | +       | _      | -        | 1         |
|          | $\Box$   | 47                    |          |           | 1       |         | t |          | Т | 7  |            | Г        | 1       |        | _        | 1         |
|          |          | 48                    |          |           | Ī       |         | Ī |          |   | j  |            |          | _       | ٦      | _        | 1         |
|          |          | 49                    |          |           | I       |         | I |          |   |    |            |          | ]       |        |          | ]         |
|          |          | 50                    |          |           | $\perp$ |         | L |          |   |    |            |          | $\prod$ |        |          | ]         |

| Claim    |                                  |              | Date     |    |   |          |   |   |   |    |        |   |        |          |          |   |          |
|----------|----------------------------------|--------------|----------|----|---|----------|---|---|---|----|--------|---|--------|----------|----------|---|----------|
| Ť        |                                  | +            |          | Г  | _ | Т        | _ | Γ |   | T  | -      | ř | Т      |          | Т        |   | Г        |
| <u></u>  | Original                         |              |          |    |   |          |   | ı |   | l  |        |   |        |          | 1        |   |          |
| Final    | 1.5                              | ·            |          |    |   | l        |   |   |   | 1  | i      |   | ı      |          | J        | ĺ |          |
|          | 0                                | 1            | i        |    |   |          |   | l |   |    |        |   | Ţ      |          |          |   |          |
|          | 51                               | +            | _        | Н  | _ | t        |   | r | - | H  | 7      | _ | $^{+}$ |          | H        | - |          |
|          | 51<br>52                         | $\top$       | i        | -  | _ | T        | _ | H |   | ┪  | ┪      | _ | $^{+}$ | _        | H        |   | -        |
|          | 53                               | 十            | ٦        | _  | _ | T        |   | r | _ | T  | 7      | _ | t      |          | $\vdash$ | _ | -        |
|          | 53<br>54                         | 7            | ٦        | _  |   | T        | _ | r | _ | Т  | 1      |   | †      | _        | H        | ┪ |          |
|          | 55                               | 1            |          |    |   | T        |   |   | _ | Т  | 1      |   | †      | _        | Г        | 7 | _        |
|          | 56                               | $\top$       | ٦        |    |   | Г        |   | Г |   |    | 7      |   | T      |          | T        | 1 |          |
|          | 57                               | T            | ٦        |    | - |          |   | Г |   |    | 7      | _ | T      |          | Г        | 1 |          |
|          | 58                               | $\mathbf{I}$ | J        |    |   |          |   |   |   |    | 1      |   | Т      |          |          | ٦ |          |
|          | 59                               |              | I        |    |   |          |   |   |   |    | 1      |   | T      |          |          | 7 |          |
|          | 60                               |              | 1        |    |   |          |   |   |   |    | $\Box$ |   | Π      |          |          | 1 |          |
|          | 61                               | 丄            | 1        | _  |   |          |   |   |   | •  | I      |   | Ι      |          |          |   |          |
|          | 62                               | ↓_           | 4        | _  | 1 |          | 4 |   | ┙ |    | 1      |   | L      | ┙        |          | 1 |          |
|          | 63                               | $\perp$      | 4        |    | 1 |          | 1 |   | 4 |    | 1      |   | L      | _        |          | 1 |          |
|          | 64                               | 4            | 1        | _  | 4 |          | 4 | _ | 1 |    | 1      | _ |        | _        |          | 1 |          |
|          | 65                               | ╀            | 4        | _  | 4 |          | 4 | _ | 4 |    | 1      |   | L      | 4        |          | 1 |          |
|          | 66                               | ╄            | 4        | _  | 4 |          | 4 |   | 4 |    | 1      |   | L      | 4        | _        | 1 |          |
|          | 67                               | ╄            | +        |    | 4 |          | 4 | _ | 4 |    | 1      |   | _      | 4        |          | 4 |          |
|          | 68                               | ╁            | ╁        | _  | + |          | + | _ | + | _  | +      |   | ⊢      | +        | _        | + | _        |
|          | 69<br>70                         | ╀            | +        |    | + | _        | + | _ | + |    | +      |   | H      | -        |          | + |          |
|          | 71                               | ╁╌           | +        | _  | t | _        | + |   | ł |    | ╀      |   | H      | +        | _        | + | _        |
|          | 72                               | ╁╌           | t        |    | t |          | + | _ | + | _  | ╁      | _ | ⊢      | +        |          | t | _        |
|          | 73                               |              | t        |    | t | _        | t | _ | t |    | t      |   | -      | 1        | -        | t | _        |
|          | 71<br>72<br>73<br>74<br>75<br>76 | 一            | t        | _  | t |          | t | _ | t |    | t      |   | _      | †        |          | t | _        |
|          | 75                               |              | T        |    | t |          | Ť |   | t | _  | Ţ      |   |        | †        |          | t | ┪        |
|          | 76                               |              | Ι        |    | Ī |          | Ī |   | Ī | _  | Ī      |   |        | Ť        |          | T | ٦        |
|          | 77<br>78<br>79                   |              | I        |    | I |          | I |   | I |    | L      |   |        | Ι        |          | Ι |          |
|          | 78                               | _            | L        | _  | L |          | L |   | L |    | L      |   |        | 1        |          | L |          |
|          | 79                               | ╙            | Ļ        | _  | L |          | ļ | _ | L |    | L      | 4 | _      | 1        |          | L | ᆜ        |
|          | 80                               | L            | ╀        |    | Ļ |          | Ļ |   | Ļ |    | L      | 4 |        | 1        |          | L | 4        |
|          | 81<br>82                         |              | ŀ        |    | Ļ |          | ŀ |   | ŀ |    | L      | 4 |        | 1        |          | L | 긕        |
|          | 83                               | ├            | ╀        | _  | ŀ | _        | ╀ | _ | ŀ |    | H      | - |        | +        |          | ┞ | 4        |
| -        | 84                               |              | ╀        | -  | ŀ |          | ╀ | _ | ┞ | _  | H      | ┥ |        | ╀        |          | ┞ | ᅥ        |
| -        | 85                               | -            | ┝        | -  | H | -        | ╁ | - | ┞ | _  | ┝      | + |        | ╁        | _        | ┞ | ᅥ        |
|          | 86                               | -            | H        | _  | H | -        | t | _ | H | -  | ┝      | ┪ |        | ╁        | _        | ┝ | ᅱ        |
|          | 87                               |              | H        |    | H | _        | t |   | H | _  | ┝      | 7 | _      | t        | _        | - | ┪        |
|          | 88                               |              | T        | ٦  | T |          | t |   | t |    | Τ      | 7 |        | t        |          | H | ヿ        |
|          | 89                               | _            |          | ٦  |   |          | Γ |   | r |    | Г      | 1 |        | t        |          | ۲ | $\dashv$ |
|          | 90                               |              |          |    |   |          | Г |   | Γ |    |        | ┐ |        | T        |          |   | ٦        |
|          | 91                               |              |          |    |   |          |   |   | L |    |        | 1 |        | Ī        |          |   | ┒        |
|          | 92                               |              |          |    |   |          | Ш |   |   |    |        | I |        | I        |          |   | ┒        |
|          | 93                               | _            | L        | 4  | _ | _        | L |   | L | _  |        | 4 | _      | L        | _        |   | ╝        |
|          | 94                               | _            | L        | 4  |   | $\dashv$ | L | 4 |   | 4  | _      | 4 | _      | L        | _        | _ | 4        |
|          | 95                               | _            | <u>_</u> | 4  | _ | 4        | L | 4 | L | 4  |        | 4 | _      | L        | 4        | _ | 4        |
| -+       | 96<br>97                         | $\dashv$     | _        | 4  |   | 4        | L | _ | _ | 4  |        | + | _      | L        | 4        | _ | 4        |
| -        | 98                               | $\dashv$     | _        | 4  | _ | 4        | L | 4 |   | 4  |        | + |        | ┞        | 4        | _ | $\dashv$ |
| -        | 99                               | $\dashv$     |          | +  |   | 4        | - | 4 | _ | +  |        | + |        | ┝        | -        | - | $\dashv$ |
| $\dashv$ | 100                              | $\dashv$     | _        | +  | _ | $\dashv$ | - | + |   | ┥  | _      | + |        | $\vdash$ | -        | - | $\dashv$ |
|          | .00                              |              | -        | _1 | _ | 1        | _ | _ | - | _1 | -      |   | _      | _        | _1       | _ | ٧        |

|              | Claim             |           |          | Date     |          |         |        |           |         |          |           |  |  |
|--------------|-------------------|-----------|----------|----------|----------|---------|--------|-----------|---------|----------|-----------|--|--|
| Final        | Original          |           |          |          |          |         |        |           |         |          |           |  |  |
|              | 101               |           |          |          |          | İ       | 士      | +         |         |          | ┢         |  |  |
|              | 102               | _         | L        |          | L        |         | Т      |           |         |          | Г         |  |  |
| L            | 103               |           |          |          | L        |         |        | $\Box$    |         |          |           |  |  |
| _            | 104               | L         | L        |          | L        |         |        |           |         |          |           |  |  |
|              | 105               | <u> </u>  | <u> </u> | _        | L        |         |        |           |         |          |           |  |  |
| <u> </u>     | 106               | _         | L        | _        | L        | $\perp$ | ┸      |           |         |          |           |  |  |
| <u> </u>     | 107               | ļ_        | <u> </u> | <u> </u> | L        | 1       | 4      | 4         | $\perp$ |          | L         |  |  |
| -            | 108               | ـــ       |          |          | L        | 1       |        | 4         | _       |          |           |  |  |
| <u> </u>     | 109               | ├-        | -        | _        | -        | +       | -      | 4         | 4       | _        | -         |  |  |
| -            | 110<br>111        | -         | -        |          | ┞        | ╀       | +      | +         | -       | _        | _         |  |  |
| $\vdash$     | 112               | ├-        | Н        |          | -        | ╀       | +      | +         | +       | $\dashv$ |           |  |  |
| $\vdash$     | 113               | ┢         | $\vdash$ |          | ┝        | ╁       | +      | +         | +       | -        | _         |  |  |
|              | 114               | H         | Н        | _        |          | ╁       | ╁      | +         | +       | $\dashv$ | -         |  |  |
|              | 1115              |           |          |          | $\vdash$ | ╁       | 十      | +         | +       | $\dashv$ |           |  |  |
|              | 116<br>117        |           |          |          | Т        | 1       | $\top$ | $\top$    | 十       | ┪        |           |  |  |
|              | 117               |           |          |          |          | T       | T      | 1         | Ť       |          | 7         |  |  |
|              | 118               |           |          |          |          | L       |        |           |         |          |           |  |  |
| <u> </u>     | 119               |           |          |          |          | L       |        | $\perp$   | $\perp$ |          |           |  |  |
| <u> </u>     | 120               | Щ         |          | _        |          | Ļ.      | ┸      | 4         | $\perp$ | 4        |           |  |  |
| <u> </u>     | 121               | _4        |          | _        |          | ╀       | +      | ╀         | 4       | 4        | _         |  |  |
| $\vdash$     | 121<br>122<br>123 | _         | -        | -        |          | ╀       | +      | +         | 4       | 4        | _         |  |  |
| $\vdash$     | 124               | $\dashv$  | $\dashv$ | $\dashv$ |          | ╁       | ╁      | +         | +       | 4        | -         |  |  |
|              | 124<br>125        | $\dashv$  | ᅱ        | 7        | -        | ╁       | ╁      | +         | ╁       | +        | $\dashv$  |  |  |
|              | 126               |           |          | $\neg$   | _        | 1       | ✝      | $\dagger$ | +       | +        | ᅱ         |  |  |
|              | 127<br>128        |           |          |          |          |         | 1      | 1         | T       | 7        | ヿ         |  |  |
|              | 128               |           |          |          |          |         | L      |           | Ī       |          |           |  |  |
| L            | 129<br>130        | _         | _        | _        |          | L       | L      | L         | Ţ       | $\perp$  | $\Box$    |  |  |
| <u> </u>     | 130               | _         |          | _        |          | Ļ       | 1      | ┶         | 4       | 4        | 4         |  |  |
| ├            | 131               | -         | 4        | 4        |          | L       | ╄      | ╀         | +       | +        |           |  |  |
| <u> </u>     | 132<br>133        |           | +        | $\dashv$ |          | L       | +-     | ╀         | ╀       | 4        | -4        |  |  |
| <del> </del> | 134               |           | $\dashv$ | +        | _        | ┝       | ╀      | ╀         | ╀       | +        | $\dashv$  |  |  |
| <del> </del> | 135               | 寸         | $\dashv$ | +        |          | ┝       | ╁      | ╁         | ╁       | +        | $\dashv$  |  |  |
|              | 136               | $\dashv$  | 寸        | ┪        | _        | H       | 十      | +         | +       | +        | ᅱ         |  |  |
|              | 137               | 寸         |          | T        |          |         | T      | †         | Ť       | 1        | ヿ         |  |  |
|              | 138               |           |          | $\Box$   |          |         | Γ      |           |         | T        |           |  |  |
|              | 139               |           | _        | _        |          |         |        | L         |         |          |           |  |  |
| <u> </u>     | 140               | 4         | 4        | 4        |          |         | ╙      | ╀         | ╀       | 4        | 4         |  |  |
| <u> </u>     | 141               | +         | +        | +        | _        | _       | ╀      | ╀         | +       | 4        | -         |  |  |
| <u> </u>     | 142               | -+        | +        | +        | _        | -       | ╀      | +         | ╀       | +        | 4         |  |  |
|              | 144               | $\dashv$  | +        | +        |          |         | ╁      | ╁         | +       | +        | $\dashv$  |  |  |
|              | 145               | 寸         | +        | +        | -        |         |        | †         | ╁       | +        | $\dashv$  |  |  |
|              | 146               | $\exists$ |          | 7        |          |         | 1      | T         | +       | †        | $\dashv$  |  |  |
|              | 147               |           |          | ╛        |          |         |        | Γ         | T       | †        | $\exists$ |  |  |
|              | 148               |           |          | $\Box$   |          |         |        | Ι         | 1       | 丁        |           |  |  |
|              | 149               | $\perp$   | $\bot$   | floor    |          | _       |        |           | I       | I        |           |  |  |
|              | 150               |           |          | $\perp$  |          |         |        |           |         | Ι        |           |  |  |